

Oceanus Ultimate

ROV System – 2024 Specifications



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C-026_Oceanus_Ultimate_2024-PR6



The system includes the Oceanus Ultimate ROV (with hardshell IP rated wheeled transport case), the 3000 series topside ROV control system featuring two built-in PC computers, a primary 18.5" TFT active matrix video display panel and a secondary 10.1" TFT touch active matrix panel (a display panel dedicated to pre-installed proprietary Flight Control System software) and MarineNav's Ultimate ROV joystick/hand-held controller (v4.0). All system components are housed in IP-rated hardshell transport cases.

Contact MarineNav for other system upgrade options, current pricing and compatible ROV accessories. Tether sold separately.



Eight vectorized thruster design. Dual integrated topside computers. HD 1080P front and rear-facing ROV video cameras. Upgrade your ROV with an optional DVL and other hardware to utilize the full potential of built-in autopilot mode functions.^Δ

Features a distinctive eight vectorized thruster configuration, the Oceanus Ultimate ROV is capable of sustained pitch and roll maneuvers. This freedom of motion offers precision when using on-board camera systems, manipulators, sonar systems, and other attachments.

The MarineNav Oceanus Ultimate ROV offers these standard features;

- Unique eight vectorized thruster design provides lateral movement and pitch and roll for precise piloting capabilities
- Choose between 'full manual control', 'autopilot assisted flight' and 'autopilot' ROV piloting modes^Δ
- Power over tether design
- Up to 4 knots top speed*
- 6 x 1500 lumen front lights, 2 x 1500 lumen back lights

- Two on-board 1080p high definition cameras including a front-facing camera with 180° vertical tilt functionality and a back-facing fixed position camera. Camera functions controlled through touch sensitive interface commands (front and rear Ultra HD 4K cameras are an optional system upgrade available at the time of ROV build)
- Topside features dual built-in PCs. A primary i7 industrial computer with 2 TB SSD and a secondary Windows 11 based PC computer with 256 GB SSD used to run the majority of third party software. Secondary computer and ROV video feed can be displayed in full-screen, PIP or 50/50 split viewing modes on an self-contained 18.5" display panel
- Numerous attachment options through MarineNav's topside Multi-Port. Operate up to three ROV attachments simultaneously
- Wireless broadcasting feature allows operator screen sharing to multiple parties
- Optional MarineNav Fleet Management suite reports status and health of ROV remotely for full tracking of individual or multiple units
- Protected by a 3-year limited warranty, MarineNav's Peace of Mind guarantee and Advance Replacement warranty*

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Specifications - Overview	
Certifications	ISO 9001: 2015
Operating Environment	Fresh or salt water, 0-50°C (32-122° F)
Standard Depth Rating †	400m (1312 ft)
Maximum Speed ×	4 kn
Approximate Total Shipping Weight †	90.00 kg (200.00 lbs)
Transport Cases	Portable IP 65 rated cases (when closed), constructed of ultra high density polyethylene, neoprene o-ring and ABS latches
Owners Manual	MarineNav Ultimate ROV operators manual provided. Digital version of manual saved to topside computer
System Tool Kit	44 sets of ROV ballast weight nuts and bolts. Spares kit includes assorted panhead screws, nuts and other fasteners for ROV
Settings	Internally saved, persist through power cycles
Warranties*	3-year limited warranty (if registered within first year of purchase). Peace of Mind guarantee, Advance Replacement warranty

Specifications - Remotely Operated Vehicle (ROV)	
ROV Power	Power over tether
ROV Housing Material	Anodized marine grade aluminum, protective coating available
ROV Dimensions	826 mm (32.50") long, 565 mm (22.25") wide, 330 mm (13.00") height
ROV Dry Weight ■	30.3 kg (66.8 lbs)
AUX Ports	4 auxiliary ports supporting: Ethernet / Spare pair / Manipulator / USB / 12V / 24V DC
ROV Data Storage	64 GB solid state
ROV Control	IP 65 rated MarineNav hand-held controller (v4.0)
ROV Movement and Control	Full depth, horizontal and lateral movement: Auto Depth, Heading Hold and ROV Stabilize modes
ROV Lights	8 x 1500 lumen lights (6 x 1500 lumen front lights, 2 x 1500 lumen rear lights)

OCEANUS ULTIMATE ROV



Specifications - Remotely Operated Vehicle (ROV)	
ROV Camera	Internal front camera: 1080p with tilt control Internal rear camera: 1080p full HD fixed position (toggle between camera systems functions and control recording feature with topside Flight Control System software) Optional upgrade to 4k cameras at time of initial ROV build (not available as an after market system upgrade)
Camera Tilt Angle	Front camera: +/- 180° Pitch (vertical rotation) Rear camera: fixed position
Camera Focus Range	Front camera: From the face of the housing dome to infinity with manual control Rear camera: 6" to infinity fixed focus
Camera Field of View	120° field of view
Available Accessory Attachments + ▲	Single axis manipulator arm, 360° rotating manipulator arm, USBL, hull crawler, metal thickness gauge, RS485 or Ethernet based sonars and accessories

Specifications - Handheld Controller (v4.0)	
Housing Materials	Anodized marine grade aluminum
ROV System Compatibility	Fully integrated with MarineNav's FCS software Designed specifically for the Oceanus Ultimate ROV system.
ROV Control Array	Primary ROV control via a 3-axis joystick controller featuring Hall-effect technologies and a potentiometer thumb wheel depth control. Two micro joysticks provide control over ROV pitch and roll and the operation of a rotating manipulator. Nineteen command buttons control essential ROV functions
Connector End	USB connector
Transport Case	Portable IP rated case constructed of ultra high density polyethylene, neoprene o-ring and ABS latches

OCEANUS HAND CONTROLLER (v4.0)



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Specifications - Topside Control Case

Topside Power	Recommended Input: 110-240 V AC, 3000 watts. - 110V - Maximum 1600 watts - 240V - Maximum 3200 watts Optional upgrade - external PSU available
Topside Control Case	Rugged waterproof hardshell case with wheels and telescoping tote handle, transport requires one person, IP 65 when closed, IP 62 when open
Topside Unit Housing Material	Ultra high density polyethylene, neoprene o-ring and ABS latches
Topside Dimensions	508 mm (20.0") long, 355.6 mm (14.0") wide, 203.2 mm (8.0") height
Topside Unit Weight†	20.65 kg (45.5 lbs)
Topside Safety Features	Bender Isometer and GFCI circuit breaker
Topside Computers	- Primary computer - i7 industrial - Secondary computer - Elk Lake CPU, 8 GB RAM, Windows 11 based PC
Topside Computers Data Storage	- Primary computer: 2 TB solid state drive - Secondary computer: 256 GB SSD storage
IMU (Sensors)	Always on, Integrated with accelerometer & magnetometer measuring telemetry including tilt, roll, pitch, and heading, auto heading, auto depth functionality
Primary Computer Ports	3 USB, 1 LAN (Ethernet), 1 Multi Port
Secondary Computer Ports	4 USB, HDMI out, Wi-Fi, connection to ROV via Ethernet switch
Wireless	Wi-Fi video broadcast to multiple devices simultaneously via integrated antenna, Wireless specification 802.11 ac/b/g/n on 2.4/5 GHZ
Video Output	HDMI video output
Primary Display	18.5" TFT active matrix panel, 1600 nits brightness (full daylight readable), 1920 x 1080 resolution. Optional 2000 nits available
Secondary Display	10.1" TFT Touch active matrix panel, 1000 nits brightness (full daylight readable), 1280 x 800 resolution
Topside Unit Software OS	- ROV software: Linux OS / MarineNav's Proprietary software interface - Secondary PC: Windows 11
On-Screen Display (OSD)	Real-time data including recording time, voltage, water temperature, depth, date/ time stamp, heading and attitude is overlaid or embedded with video, Operator input lines available, GPS co-ordinates displayed as overlay option when paired with accessory, enabled data entry field with customized logo available
Depth Gauge	Calibrated in meters or feet (user selectable)
Video Recording	.MKV or MP4 video formats to PC hard drive (.MKV is default video format. Select MP4 option using FCS software)

Specifications - Topside Control Case (continued)

Remote Fleet Management (Optional system upgrade)	Monitor multiple ROV systems within your fleet. Track real-time GPS positioning on an interactive map. View remote health reporting. Export data to .CSV format
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THE OCEANUS ULTIMATE CONTROL SYSTEM

A hardshell, IP rated self contained control hub featuring built-in 18.5" video display panel, a 10.1" TFT touch-sensitive software interface panel, built-in primary i7 industrial computer with 2 TB SSD and a built-in secondary Windows based PC with 256 GB SSD*



Specifications - ROV Tether & Deployment Systems

ROV Tether	Rapid deployable, neutrally buoyant tether with water-tight cable connections
Maximum Tether Length (Tether sold separately)	Standard copper core tether: 600m (1969 ft) maximum tether length (gigabit data transfer speed) Fibre optic tether: (requires additional battery packs) 600m to 4 km (1969 ft to 2.49 miles) maximum tether length
Tether Deployment Systems	Optional system upgrade with deployment systems. Choice of maximum tether capacity of either 180m, 350m or 600m tether (tether sold separately)

LARGE TDS WITH 10M DECK LEAD

Maximum 600m tether capacity (tether sold separately)



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Terms and Conditions

THREE-YEAR LIMITED WARRANTY

- * MarineNav's Three Year Limited Warranty applies to customers who have purchased one of the following ROV systems; an Oceanus Mini, an Oceanus Pro Classic, an Oceanus P8 Pro, or an Oceanus Ultimate ROV system. An initial two-year limited warranty is made available when your eligible MarineNav Oceanus ROV is registered within the first year of purchase. For the warranty to remain valid all regimented ROV scheduled maintenance must be completed according to manufacturers guidelines. At the completion of the initial two-year limited warranty period a third year extension is provided to those customers who have adhered to all regimented ROV maintenance as outlined by manufacturer. Warranty restrictions apply;
- a) MarineNav Ltd warrants that tether supplied with ROV systems or supplied separately will be free from defects in materials and workmanship under normal use and service for a period of ninety (90) days from date of shipment.
- b) MarineNav Ltd warrants that tether whips that were provided as part of an ROV system at time of original shipment will be free from defects in materials and workmanship under normal use and service for a period of six (6) months from date of shipment.
- c) MarineNav Ltd warrants that thruster motors that were provided as part of an ROV system at time of original shipment will be free from defects in materials and workmanship under normal use and service for a period of one (1) year from date of shipment. This does not include wearable parts such as propellers, which are considered a consumable item. Tampering, misuse and regular wear are not covered by warranties.
- d) MarineNav Ltd warrants that the ROV float block that was provided as part of an ROV system at the time of original shipment, or purchased separately will be free from defects in materials and workmanship under normal use and service for a period of three (3) months. The three-month warranty does not cover normal wear such as scuffs, scrapes indentations, or other damage to the float block caused by external environmental factors.
- e) MarineNav Ltd warranties exclude corrosion that may occur on ROV metallic parts caused in part by improper cleaning and storage of ROV after each mission. Refer to your owner's manual for proper cleaning and maintenance of your ROV system.

PEACE OF MIND GUARANTEE

- 1) When purchasing an Oceanus ROV system, our customers are entitled to a comprehensive maintenance service package free of charge. To qualify for the free comprehensive system maintenance program, ROV customer must ship their Oceanus ROV to a MarineNav-certified service center within the first 25 operational hours. ROV operational hour count recorded and saved to the Oceanus ROV operating system. The customer is responsible for payment of shipping costs to and from a MarineNav-certified service center.
- 2) MarineNav provides full coverage, for a period of twelve months, of any design or structural enhancements to any component of your ROV purchase. This includes the ROV, topside control case and MarineNav manufactured attachments. MarineNav will replace any hardware components on your ROV which have been upgraded or enhanced within your 12-month period of ownership. The 12-month period begins when the shipment is received based on the shipment tracking number. The upgrades occur during your ROV's scheduled routine maintenance at a certified MarineNav service center.
- 3) MarineNav will provide ROV system software upgrades free of charge of our proprietary Flight Control Software over the normal operating lifespan of your purchased ROV system. Lifetime software updates require customers to have both reliable Internet and telephone connections. The software updates are done remotely by our in-house computer technicians. A phone call is requested to assist the customer through simple steps in connecting the ROV to allow remote access.

ADVANCE REPLACEMENT WARRANTY

MarineNav Ltd will in exceptional circumstances provide advance replacement of equipment under our original manufacturer warranty and subject to the following Terms & Conditions.

We will agree to provide advance replacement when we determine, in our sole and absolute discretion, that a defect in manufacturing and/or materials has caused equipment that we supplied to become inoperable, unsafe, or otherwise unsuitable. Advance replacement is subject to all other terms, conditions and exclusions of our Advance Replacement Guarantee and original manufacturer warranty.

Advance replacements are only provided on the condition that the client shall return the defective equipment to MarineNav Ltd within three (3) business days. Should the items being returned not be received by MarineNav Ltd within three (3) days from the date of the client's receipt of the advance replacement, the client agrees that the advance replacement equipment will be chargeable to the client at full value. Any deviations from this condition shall be at MarineNav Ltd.'s sole and absolute discretion. Return freight costs on and risk of loss or damage to equipment being returned are the responsibility of the client.

When the returned equipment is received back, it will be inspected and reviewed by one or more service technicians and/or by quality control personnel. If it is deemed by MarineNav Ltd., in its sole and absolute discretion, that the returned equipment has suffered physical damage, excess wear and tear beyond what is considered typical, or if it was damaged by misuse or operation outside of the normal and intended purpose of the equipment, the client agrees that repair and/or replacement costs will be chargeable at the value determined by MarineNav Ltd.

MarineNav Ltd will pay freight costs for shipping advance replacement equipment to the client location at a standard level of service. If the client requires expedited or express service this may be chargeable to the client at the discretion of MarineNav Ltd.

⁴ With an optional integrated DVL, Altimeter data and speed over ground can be measured and the position hold feature can be enabled. Future software updates will enable Semi-Autonomous control.

⁹ While possible to dive to a maximum depth of up to 400m using an ROV system outfitted with a standard ROV float block, repeated dive missions beyond 300m will shorten the float lifespan and may lead to eventual float block failure. MarineNav requires users to upgrade their ROV with an optional Deep Water Buoyancy ROV float block for repeated deep dive missions exceeding 300m. Contact MarineNav for product details and pricing.

× Maximum speed test conducted with absence of all ballast weights.

† The approximate total shipping weight is calculated on the combined weight of a standard Oceanus Ultimate ROV submersible, ROV ballast weights, Oceanus topside control case, Oceanus Joystick/Hand held controller (v4.0) and all included hardshell shipping cases. The approximate total shipping weight does not include ROV tether or other ROV accessories.

■ The ROV dry weight is calculated on a standard Oceanus Ultimate ROV without ROV ballast weights, additional system upgrades or ROV accessories.

+ Some accessories require use of the MarinNav Multiport communication system.

▲ Oceanus ROVs may exceed recommended depth ratings of available accessories. Consult manufacturer specifications for all accessories prior to use.

‡ The topside unit weight is calculated on a standard Oceanus 3000 series topside control system consisting of dual integrated PC computers, SSD drives, built in display panels and IP rated hardshell transport case. Other variables will increase the topside weight. ROV Joystick/Hand Controller and ROV tether is not included as part of the topside weight.

MarineNav Ltd. is an ISO 9001:2015 certified company. Our certified Quality Management System ensures that each unit we produce adheres to the strictest standards and complies with customer requirements.

While we strive to ensure the accuracy of all items and descriptions in this document, this is not always possible. Specifications, options, and availability are subject to change without notice. Errors and omissions excepted. We reserve the right to limit quantities.



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